

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

Applicant's or agent's file reference <b>SW/P016382WO</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. <b>PCT/GB 03/00897</b>	International filing date (day/month/year) <b>03.03.2003</b>	Priority date (day/month/year) <b>01.03.2002</b>
International Patent Classification (IPC) or both national classification and IPC <b>A61B5/00</b>		
Applicant <b>BEAUMONT, Terry</b>		

<p>1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion      II <input type="checkbox"/> Priority      III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability      IV <input type="checkbox"/> Lack of unity of invention      V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement      VI <input type="checkbox"/> Certain documents cited      VII <input type="checkbox"/> Certain defects in the international application      VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand <b>30.09.2003</b>	Date of completion of this report <b>10.03.2004</b>
Name and mailing address of the International preliminary examining authority:  <b>European Patent Office - P.B. 5818 Patentlaan 2      NL-2280 HV Rijswijk - Pays Bas      Tel. +31 70 340 - 2040 Tx: 31 651 epo nl      Fax: +31 70 340 - 3016</b>	Authorized Officer  <b>Lommel, A</b> Telephone No. +31 70 340-4230



INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/GB 03/00897

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-7 as originally filed

**Claims, Numbers**

1-15 as originally filed

**Drawings, Sheets**

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No.

**PCT/GB 03/00897**

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1,3-6
Inventive step (IS)	Yes: Claims	
	No: Claims	2,7-15
Industrial applicability (IA) --	Yes: Claims	1-15
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/00897

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Reference is made to the following documents:**

D1: US 5673692 A1

D2: US 5971931 A1

D3: DE 3723275 A1

**2. The subject-matter of claims 1, 3-6 is not novel (Article 33(2) PCT).**

The document D1 discloses (the references in parentheses applying to this document):

A sensing device comprising:

a) physiological sensing means (col. 1, lines 42-54); and  
b) locating means to locate the sensing means inside an ear canal (col. 7, lines 7-12) whereby the locating means is provided with an aperture which, when the sensing device is fitted in the ear canal, allows motion of the air in and out of the ear canal (col. 7, lines 29-36).

Furthermore, the locating means, thus the housing (ref. sign 76), is made of a pliable material; The features of claims 3-5 are not new over the disclosure of document D1 (col. 6, line 65-col. 7, line 6 and col. 7, lines 13-18).

Also, document D1 discloses a sensing device comprising pulse oximetry optical transmitters and receiver (col. 4, lines 3-8 and col. 7, line 61-col. 8, line 19).

Consequently, the subject-matter of claims 1, 3-6 is not novel (Article 33(2) PCT).

**3. The subject-matter of claims 2, 7-15 cannot be considered as involving an inventive**

INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/GB03/00897

step (Article 33(3) PCT).

3.1 The sensing device disclosed in document D1 is O-shaped (D1, figures 6-10). In claim 2 a slight constructional change in the shape of the locating means of claim 1 is suggested which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can be readily contemplated in advance. Consequently, the subject-matter of claim 2 appears to lack an inventive step (Article 33(3) PCT).

3.2 Document D1 discloses a sensor at the tip of the locating means for measuring the temperature (D1, figure 10, ref. sign 122; col. 8, lines 37-49). Using a heat transfer tip contacted with a temperature sensor, as suggested in claims 7 and 8, in order to achieve the same result lies within the scope of the customary practice followed by persons skilled in the art and cannot be considered as involving an inventive step (Article 33(3) PCT).

3.3 The use of ear muffs, ear molds, ear clips or headbands in order to secure a sensing device to the ear are well-known to those skilled in the art. The use of a headband and an ear muff is disclosed by document D1 (D1, col. 9, lines 13-18), while a clip is briefly mentioned (D1, figure 4, ref sign 76 and figure 5, ref. sign 69). The inclusion of securing means in accordance with suggested claims 9-11 is regarded as an obvious design possibility for the skilled person in order to secure a sensing device to the ear, thus, not involving an inventive step in the sense of Article 33(3) PCT.

3.4 Audio communication means, as suggested by claim 12, to facilitate communication between the nursing station and the patient has already been employed, see document D2, col. 2, lines 31-46. It would therefore be obvious to the person skilled in the art, to apply this idea resulting in a corresponding effect to a sensing device according to document D1. A realisation of an audio communication means comprising a speaker and a microphone is given by document D3. Furthermore, the idea of having an aperture which allows motion of air in and out of the ear canal is also disclosed (D3, col. 3, line 57-col. 4, line 2), thus, not involving an inventive step in the sense of Article 33(3) PCT.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/00897

3.5 The use of sound absorbent material in order to absorb generated vibrational energy caused by speakers or microphones is well-known by those skilled in the field of acoustics. In accordance with circumstances, an absorbent material of suitable density, weight, size and shape is chosen. Suitable materials are for instance polyester fiber, felt, wood pulp, rock wool, mineral wool, cotton, glass fiber, sponge rubber, elastomers, silicone or a combination of these. The features of claims 13-15 are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed, thus, not involving an inventive step in the sense of Article 33(3) PCT.